

REMARKS

Claims 20-49 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Section 103(a) Rejections:

The Examiner rejected claims 20-21, 23-30, 33-34, 36-43 and 46-49 under 35 U.S.C. § 103(a) as being unpatentable over Gunderson (U.S. Patent 6,073,220) in view of Binford et al. (U.S. Patent 6,366,965) (hereinafter "Binford"). The Applicant respectfully traverses this rejection for at least the following reasons.

The cited art does not teach or suggest a first storage device configured to store an operating system for booting the computer system, and a second storage device configured to store the operating system for booting the computer system, wherein the first storage device and the second storage device appear as a single target device to the computer system, as recited in claim 1. The Examiner admits that Gunderson does not teach that both the first storage device and the second storage device appear as a single target device to the computer system. The Examiner relies on the teachings of Binford to suggest modifying the system of Gunderson so that both the first storage device and the second storage device appear as a single target device to the computer system. However, as explained in more detail below, the Examiner's reliance on the teachings of Binford is misplaced.

Contrary to the Examiner's assertion, Binford does not teach that multiple redundant components within a device appear as a single target device to a computer system. Instead, Binford is concerned with the problem of maintaining a unique identifier for a storage enclosure if the environmental service card that stores the identifier is moved to a different enclosure (Binford -- col. 3, lines 1-7). The identifier in Binford is a unique identifier for the storage enclosure (Binford -- col., lines 43-45). However, just because the enclosure has a unique identifier does not mean that the

storage devices within the enclosure appear as a single target device to the computer system. In fact, it is common practice for a storage enclosure to have a unique identifier for an enclosure that contains multiple storage devices that are available to a host computer as separate targets. For example, in storage area networks (SANs) a storage enclosure may have a fibre channel world wide name (WWN) for its fibre channel port that connects to the SAN fabric. Multiple storage devices within the enclosure are typically made available to host computers as separate SCSI targets (LUNs). Simply having a unique identifier (WWN) for the disclosure does not mean that the storage devices within the enclosure appear as a single target device to a computer system.

The Examiner also states: “Binford teaches that multiple redundant components, such as storage devices, may be used to provided data, such as an operating system, to a computer system [col. 1, lines 29-51].” (Office Action, p. 3). The Examiner has overstated the teachings of Binford. Applicant notes that Binford does refer to redundant storage components. Specifically, Binford refers to RAID systems (col. 1, lines 51-62). However, contrary to the Examiner’s assertion, Binford does not teach that multiple redundant storage components are used to store an operating system for booting the computer system. There is no mention at all in Binford of storing an operating system for booting a computer system on redundant components. As described on pp. 6-7 of Applicants specification, RAID systems (as in Binford) are typically not suitable for this purpose.

The Examiner also states at p. 3 of the Office Action that: “Binford further teaches that the individual components within the device are treated as a single entity by the computer [col. 2, lines 23-42].” Again, the Examiner has mischaracterized the teachings of Binford. The portion of Binford cited by the Examiner (col. 2, lines 23-42) refers to physically removing a failed components and inserting a new component in its place. However, claim 20 recites a boot device that comprises first and second storage devices that are both configured to store an operating system for booting the computer system, and both appear as a single target device to the computer system. Binford’s

teaching of physically swapping a failed component for a new component is not relevant to the claimed invention.

Furthermore, Gunderson teaches away from the Examiner's proposed modification. On p. 3 of the Office Action, the Examiner states that: "One of ordinary skill in the art would have been motivated to [modify Gunderson according to Binford] so that access to the individual storage devices can be encapsulated without requiring direct BIOS calls to access to each one." However, as noted above, employing a unique identifier for a storage enclosure does not mean that the storage devices within the enclosure appear as a single target. Furthermore, as discussed at col. 6, lines 15-57 and col. 7, lines 28 – col. 8, line 5, Gunderson teaches that each drive is configured as a separate IDE target or a separate SCSI target. Moreover, Gunderson requires that the computer system accesses the drives as separate targets to copy data from the primary drive to the backup drive. As shown in Fig. 4, Gunderson's method requires device-level calls. For Gunderson's back-up technique to work, the computer system must be able to target the primary drive and back up drive separately. Therefore, Gunderson teaches away from any modification by which the primary drive and back up drive would appear as a single target to the computer system. If a proposed modification would render the prior art feature unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

Similar arguments apply to independent claims 33 and 46.

Furthermore, in regard to independent claim 33, the cited art does not teach or suggest a boot device that is configured so the computer system can access the operating system from either the first storage device or the second storage device in event of a failure of one of the storage devices. Gunderson teaches that a restore program must be manually run on the computer system from a floppy to change to a different target device (the backup drive) to be the boot drive in case of a failure of the primary boot drive (Gunderson -- col. 11, lines 36-64; Fig. 6). Thus, in Gunderson it is

the restore program running on the computer system that allows the operating system to be accessed on another drive in the event of a failure of the primary drive. Gunderson does not teach that the boot device itself is configured so the computer system can access the operating system from either the first storage device or the second storage device in event of a failure of one of the storage devices. Nor does Binford (alone or in combination with Gunderson) teach or suggest this limitation of claim 33.

In regard to independent claim 46, the cited art does not teach or suggest, upon detecting a failure of one of the storage devices, automatically continuing to provide access to the operating system stored on the non-failed one of the storage devices as the single boot device. Gunderson teaches that a restore program must be manually run on the computer system from a floppy to change to a different target device (the backup drive) to be the boot drive in case of a failure of the primary boot drive, and then the system must be rebooted (Gunderson -- Fig. 6). Thus, Gunderson clearly does not teach, upon detecting a failure of one of the storage devices, automatically continuing to provide access to the operating system stored on the non-failed one of the storage devices as the single boot device. Nor does Binford (alone or in combination with Gunderson) teach or suggest this limitation of claim 46.

The Office Action rejected claims 22 and 35 under 35 U.S.C. § 103(a) as being unpatentable over Gunderson in view of Pfeffer et al. (U.S. Patent 5,210,860), in further view of Binford. Claims 31, 32, 44 and 45 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gunderson in view of Hayden et al. (U.S. Patent 6,140,926), in further view of Binford. Applicant traverses these rejections for at least the reasons given above in regard to Gunderson and Binford.

Furthermore, in regard to all the § 103(a) rejections, Applicant asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

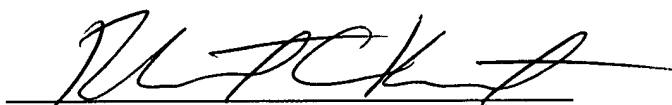
Applicant submits the application is in condition for allowance, and notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681-65300/RCK.

Also attached herewith are the following items:

- ☐ Notice of Change of Address
- ☒ Return Postcard

Respectfully submitted,



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